



3RD. INTERNATIONAL CONFERENCE
SOLAR ENERGY STORAGE AND
APPLIED PHOTOCHEMISTRY,
Cairo, Egypt
8 - 14 January 1995

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THE PROGRAM &
THE LIST OF PARTICIPANTS

REPORT DOCUMENTATION PAGE

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Third International Conference on
**SOLAR ENERGY STORAGE AND APPLIED
PHOTOCHEMISTRY**

8-14 JANUARY 1995, CAIRO, EGYPT

HONORARY PRESIDENTS OF THE CONFERENCE

PROFESSOR A. M. ABDEL-HAFEZ

THE PRESIDENT, AIN SHAMS UNIVERSITY

PROFESSOR A. M. RABEI

DEAN, FACULTY OF SCIENCE

CHAIRMAN

M. S. A. ABDEL-MOTTALEB

ORGANIZED BY

PHOTOENERGY CENTER

FACULTY OF SCIENCE, AIN SHAMS UNIVERSITY

IN COOPERATION WITH THE DEPARTMENT OF CHEMISTRY

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CONTENTS

	PAGE
[1] ACKNOWLEDGEMENT	1
[2] GENERAL INFORMATION	2
[3] CONFERENCE COMMITTEES:	
INTERNATIONAL	4
LOCAL ADVISORY	5
ORGANIZING	6
[4] THE PROGRAM	7
SUMMARY TIMETABLE	8
CONFERENCE FLOW	10
[5] LIST OF AUTHORS	17
[6] LIST OF INTERNATIONAL PARTICIPANTS	30
[7] LIST OF EGYPTIAN PARTICIPANTS	33

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for their generous financial and moral support**

Ministry of Education

Ministry of Petroleum

Ministry of International Cooperation

Cairo Governorate

International Centre for Science and High Technology

[ICTP, Trieste, Italy]

International Science Foundation (ISF)

European Research Office (ERO), US Army

Naval Research Office in Europe, US Navy

**A session will be sponsored by European Research Office
of US Airforce**

GENERAL INFORMATION

On behalf of the organizing committee, I would like to welcome you to Egypt. I hope that you will enjoy your stay here in Egypt and benefit from the scientific contents of the Conference.

His excellency the Governor of Cairo and Professor Abdel-Hafiz, the president of Ain Shams University invite all of you to a Welcome reception Cocktail party near Aramis Hall at 21.00 hs on Sunday 8 January, after the opening lecture.

Accommodation

A block of rooms has been reserved to accommodate the conference participants at Le Meridien Hotel (Heliopolis) at a special reduced rates. Continental Breakfast, Taxes and Services are inclusive.

Any extra expenses (for example, Laundry, long distant telephone calls, minibar, other restaurant charges, ..., etc.) should be paid directly to the Hotel. Therefore, please do not forget to make the necessary check with the hotel registration-information section to pay for the extra before leaving. This would be greatly appreciated.

Lunches (Open Buffet)

Please use the enclosed appropriate coupon. Make sure you show the waiter the coupons as you entered the restaurant. Drinks are not inclusive. Therefore, you have to pay for your drinks to the hotel directly.

Extra Lunch coupons (LE 40.0 or \$12.0 each) are available at the registration/ information desk of the conference.

Dinners (Open Buffet)

Coupons are available at special rate for participants (LE 50.0 or \$15.0). Ask for coupons at the Conference registration desk.

Transportation

A shuttle bus service is available free of charge, to the Airport. Please do inform LeMeridien's information desk about the details of your flight from Cairo. Upon request, the Hotel will manage to give you a drive to the Airport .

Social Activities

The following events are arranged, free of charge, for all participants:

Welcome Reception; Sunday 8 January after the opening session.

Excursion to the Egyptian Museum of Antiquities, Pyramids of Giza and Sphinx; Wednesday 11 January.

In addition to the above, during the scientific program we will operate *an accompanying person program* to include tours to visit some historic, Islamic and Coptic places.

Transport will depart from outside Le Meridien Hotel at 8.45 hs.

Conference Banquet;

has been shifted to Thursday 12 January. Egyptian traditional music and entertainments will be provided (Tickets: \$60). Please use the banquet coupons.

With my very best wishes.

Sabry Abdel-Mottaleb
Chairman

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AND ADVISORY COMMITTEE:**

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Salem M. A.	(ASU)
Souaya E. Raymond	(ASU)

THE PROGRAM

SUMMARY TIMETABLE

FOR SES&APC CONFERENCE '95

Date	Morning 08.45-12.30	Afternoon 14.00-17.50	Evening 18.30-
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SUNDAY 8 JANUARY 1995	REGISTRATION	OPENING [ABDEL-MOTTALEB] OPENING LECTURE [LOUTFY R.] GRAETZEL M. RECEPTION
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MONDAY 9 JANUARY 1995	PLENARY LECTURES [EL-BAYOUMI O.] GUILLET J. CALZAFERRI G. INVITED LECTURES [AZUMI T.] BOXER S. OPPENLAENDER T. FITZMURICE D.	PLENARY LECTURES [KOSSANYI J.] HILL C. BRASLAVSKY S. INVITED LECTURES [TOLBERT L.] TESTA A. MAZZUCATO U. BADR M. Z.	POSTER A [DOEPP D.]
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TUESDAY 10 JANUARY	PLENARY LECTURES [HILL C.] AZUMI T. LOUTFY R. O. INVITED LECTURES <div style="display: flex; justify-content: space-between;"> <div> HALL (1) [MAZZUCATO U.] LEUPOLD D. KURRECK H. HOFFMAN M. </div> <div> HALL (2) [MEL'NIKOV M.] KRISHNAN V. AQUILANTI V. ZENKEVICH E. I. </div> </div>	PLENARY LECTURES [ZIMMERMAN H.] GIARDINI A. SONG P.-S. INVITED LECTURES <div style="display: flex; justify-content: space-between;"> <div> HALL (1) [TESTA A.] FASSLER D. ZACHARIASSE K. </div> <div> HALL (2) [KRISHNAN V.] FARA L. EREMINKO A. </div> </div>	POSTER B [GEORGE M]
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WEDNESDAY 11 JANUARY	EGYPTIAN MUSEUM, PYRAMIDES AND SPHINX
[LUNCH WILL BE PROVIDED]	

Date	Morning	Afternoon	
	Evening 08.45-12.30	14.00-17.50	18.30-

THURSDAY 12 JANUARY 1995

PLENARY LECTURES

[FAHMY F.]
MORRISON H.
ZIMMERMAN H.

PLENARY LECTURES

[BRASLAVSKY S.]
TOLBERT L.
GREVELS F.

BANQUET

INVITED LECTURES

HALL (1)

[MORRISON H.]
KOSSANYI J.
FUJIMURA Y
LOEHMANN SROEBEN H.

HALL (2)

[GRAETZEL M.]
ALONSO-VANTE N.
OZANAM F.
ETMAN M.

INVITED LECTURES

HALL (1)

[BOXER S.]
HAU D.-M.
KORPPI-TOMMOLA J.
UZHINOV B. M.

HALL (2)

[HOFFMAN M.]
TERENSEKAYA I.
MEL'NIKOV
.....

FRIDAY 13 JANUARY

PLENARY LECTURES

[CALZAFERRI G.]
DUERR H.
DOEPP D.

PLENARY LECTURES

[LOUTFY R O]
BOLTON J.
HARRIMAN A

INVITED LECTURES

[GREVELS F.]
BILLING
SPANHEL
ABD EL AZIZ A.

CLOSING REMARKS

ABDEL-MOTTALEB M. S.
LOUTFY R. O.

SATURDAY 14 JANUARY

DEPARTURE

Coffee/Tea: 10.15-10.35

15.45-16.05

Lunch:

12.30 ----- 14.00

POSTER PRESENTATION BASED ON ALPHABETICAL ORDER

POSTER A: FOR AUTHORS [A-E]

POSTER B: FOR AUTHORS [F-Z]

PROGRAM

THE PROGRAM OF THE CONFERENCE IS AS FOLLOWS

1st DAY SUNDAY 8 JANUARY 1995

14.00 - 18.00	REGISTRATION AT SETI ROOM
18.30 - 19.15	OPENING CEREMONY ARAMIS HALLS 1+2 <i>ABDEL-MOTTALEB M. S. A. AND LOUTFY R.</i>
19.30 - 20.30	OPENING LECTURE CHAIRMAN <i>LOUTFY R. (CANADA)</i>
L 1	<i>GRAETZEL M. (ZWITZERLAND)</i> NANOCRYSTALLINE SOLAR CELLS; SCIENTIFIC PRINCIPLES AND ECONOMIC PERSPECTIVES
20.30 - 21.30	RECEPTION

2nd DAY MONDAY 9 JANUARY 1995

INVITED LECTURES	ARAMIS HALLS 1 + 2 CHAIRMAN: <i>EL-BAYOUMI O (USA)</i>
L 2	8.45 - 9.40 <i>GUILLET, J. (CANADA)</i> SOLAR SYNTHESIS OF HYDROGEN PEROXIDE
L 3	9.40 - 10.35 <i>CALZAFERRI G. (SWITZERLAND)</i> DYE MOLECULES IN ZEOLITES AS ARTIFICIAL ANTENNA SYSTEMS
10.35 - 10.45	COFFEE BREAK
INVITED LECTURES	CHAIRMAN: <i>AZUMI T. (JAPAN)</i>
L 4	10.45-11.20 <i>BOXER STEVEN G. (USA)</i> MECHANISM OF THE EARLY STEPS IN PHOTOSYNTHESIS
L5	11.20-11.55 <i>OPPENLAENDER Th. (GERMANY)</i> NOVEL VACUUM-UV-(VUV) AND UV-EXCIMER FLOW THROUGH PHOTORECTORS FOR WAST WATER TREATMENT AND FOR WAVELENGTHS SELECTIVE PHOTOCHEMISTRY

L 6	11.55-12.35	FITZMAURICE D. (IRELAND) HETROSUPRAMOLECULAR CHEMISTRY: AN APPROACH TO MODULATING FUNCTION IN MOLECULAR DEVICES.
12.30 - 14.00		LUNCH BREAK
L 7	14.00-14.55	CHAIRMAN: KOSSANYI J. (FRANCE) HILL CRAIG L. (USA) EXCITED STATE CHARACTERISTICS AND NEW UNACTIVATED C-H BOND FUNCTIONALIZATION PHOTOCATALYSIS BY $W_{10}O_{32}^{4-}$
L 8	14.55-15.50	BRASLAVSKY S. (GERMANY) TIME-RESOLVED PHOTOTHERMAL MEASUREMENTS ON BIOLOGICAL PHOTORECEPTORS
15.50 - 16.05		COFFEE BREAK
L 9	16.05-16.40	TESTA A. C. (USA) PHOTOINDUCED PROTON TRANSFER IN SUBSTITUTED PYRIDINES
L 10	16.40-17.15	MAZZUCATO UGO (ITALY) PHOTOCHROMIC MATERIALS: A COMPREHENSIVE KINETIC THERMO-DYNAMIC AND PHOTOCHEMICAL STUDY
L 11	17.15-17.50	BADR Z. (EGYPT) PHOTOLYSIS AND THERMOLYSIS OF ACID AMIDES AND SULPHONAMIDES; MECHANISTIC STUDIES
POSTER SESSION A		AMINOPHIS CHAIRMAN: DOEPP D. (GERMANY) 17.50-21.00 AUTHORS A - E

3rd DAY TUESDAY 10 JANUARY 1995		
INVITED LECTURES		ARAMIS 1
L 12	8.45- 9.40	CHAIRMAN: HILL C. L. (USA) AZUMI T. (JAPAN) STUDIES OF PHOTOCHEMICAL REACTIONS BY NUCLEAR SPIN POLARIZATION-DETECTED ESR SPECTROSCOPY
L 13	9.40- 10.35	LOUTFY R.O. (CANADA) A NON-SILVER DRY-PROCESSED PHOTOGRAPHIC ARTS FILM
10.35 - 10.45		COFFEE BREAK

INVITED LECTURES**ARAMIS 1****CHAIRMAN: MAZZUCATO U. (ITALY)****L 14 10.45-11.20****LEUPOLD D. (GERMANY)**CHARACTERIZATION OF PHOTOSYNTHETIC ANTENNAS
BY NONLINEAR POLARIZATION SPECTROSCOPY
(FREQUENCY DOMAIN)**L 15 11.20-11.55****KURRECK H. (GERMANY)**MIMICKING PRIMARY PROCESSES OF
PHOTOSYNTHESIS MODEL COMPOUNDS, LIGHT-
INDUCED CHARGE SEPARATION.**L 16 11.55-12.30****HOFFMAN M. Z. (USA)**ELECTROLYTE AND TEMPERATURE EFFECTS IN
PHOTOINDUCED INTERMOLECULAR ELECTRON-
TRANSFER REACTIONS**INVITED LECTURES****ARAMIS 2****CHAIRMAN: MEL'NIKOV M. (RUSSIA)****L 17 10.45-11.20****KRISHNAN V. (INDIA)**

NON-PLANAR PORPHYRIN MOLECULAR ASSEMBLIES

L 18 11.20-11.55**AQUILANTI V. (ITALY)**

NONADIABATIC ENERGY TRANSFER

L 19 11.55-12.30**ZENKEVICH E. I. (BELARUS)**DIPOLE-DIPOLE AND EXCHANGE ENERGY TRANSFER
IN DIFFERENT TYPES OF PORPHYRIN CHEMICAL
DIMERS**12.30 - 14.00****LUNCH BREAK****INVITED LECTURES****ARAMIS 1****CHAIRMAN: ZIMMERMAN H. (USA)****L 20 14.00-14.55****GIARDINI A. (ITALY)**R2PI DETECTION AND SPECTROSCOPY OF VAN DER
WAALS COMPLEXES OF 4-FLUOROSTYRENE WITH
RARE GASES**L 21 14.55-15.50****SONG PILL-SOON (USA)**PHYTOCHROME AS LIGHT SENSOR FOR
PHOTOSYNTHETIC GENE ACTIVATION**15.50 - 16.05****COFFEE BREAK****INVITED LECTURES****ARAMIS 1****CHAIRMAN: TESTA A. (USA)****L 22 16.05-16.40****FASSLER D. (GERMANY)**FLUORESCENCE LIFETIMES OF ADSORBED
POLYMETHINES**L 23 16.40-17.15****ZACHARIASSE K. (GERMANY)**

INFLUENCE OF ENERGY GAP $\Delta E(S_1, S_2)$ AND
AMINO N-INVERSION IN INTRAMOLECULAR CHARGE
TRANSFER. DUAL FLUORESCENCE AND SINGLE CT-
EMISSION

INVITED LECTURES ARAMIS 2

CHAIRMAN: KRISHNAN V. (INDIA)

L 24 **16.05-16.40** **FARA V. L. (ROMANIA)**
PHOTOPHYSICAL AND PHOTOCHEMICAL PROPERTIES
OF DYE MOLECULES IN POLYMERS USED FOR
FLUORESCENT SOLAR CONCENTRATORS.

L 25 **16.40-17.15** **EREMENKO A. (UKRAINE)**
PHOTOINDUCED ELECTRON TRANSFER BETWEEN
MOLECULES IN SILICA MATRICES

POSTER SESSION B AMENOPHIS + HATCHEPSUT

CHAIRMAN: GEORGE M. (INDIA)

17.15-20.30 **AUTHORS F - Z**

4th DAY WEDNESDAY 11 JANUARY 1995

EXCURSION

EGYPTIAN MUSEUM

PYRAMIDS,... ETC.

TRANSPORT WILL DEPART FROM OUTSIDE

THE MERIDIEN HOTEL HELIOPOLIS

AT 08.45

<LUNCH BOXES WILL BE PROVIDED>

5th DAY THURSDAY 12 JANUARY 1995

INVITED LECTURES ARAMIS 1

CHAIRMAN: FAHMY F. (EGYPT)

L 26 **8.45-9.40** **MORRISON H. A. (USA)**
PHOTOCHEMICAL REARRANGEMENTS OF
OXAZRINDINES

L 27 **9.40-10.35** **ZIMMERMAN H. E. (USA)**
RECENT ADVANCES IN MECHANISTIC AND
EXPLORATORY ORGANIC PHOTOCHEMISTRY

10.35-10.45

COFFEE BREAK

INVITED LECTURES ARAMIS 1

- CHAIRMAN: MORRISON H. (USA)**
- L 28** **10.45-11.20** **KOSSANYI J. (FRANCE)**
UNUSUALLY STRONG EMISSION FROM EXCIPLEXES
FORMED BETWEEN BENZENOID SOLVENTS AND
DIBENZOYLMETHANATBORON DIFLUORIDE
- L 29** **11.20-11.55** **FUJIMURA Y. (JAPAN)**
NUCLEAR WAVEPACKET STUDY OF UNIMOLECULAR
REACTIONS IN ULTRASHORT PULSED LASER
- L 30** **11.55-12.30** **LOEHMANN SROEBEN H.G. (GERMANY)**
FLUORESCENCE OF POLYNUCLEAR AROMATIC
COMPOUNDS AND MINERAL OILS IN ENVIRONMENTAL
MONITORING

INVITED LECTURES ARAMIS 2

- CHAIRMAN: GRAETZEL M. (ZWITZERLAND)**
- L 31** **10.45-11.20** **ALONSO-VANTE N. (GERMANY)**
THE SIGNIFICANCE OF SURFACE STATES FOR
PHOTOELECTROCATALYSIS AT THE
SEMICONDUCTOR/ELECTROLYTE INTERFACES
- L 32** **11.20-11.55** **OZANAM F. (FRANCE)**
IN-SITU INFRARED STUDY OF THE INTERFACIAL
LAYER DURING THE ANODIC DISSOLUTION OF A
SILICON ELECTRODE IN A FLUORIDE ELECTROLYTE
- L 33** **11.55-12.30** **ETMAN M. (FRANCE)**
Si ELECTROCHEMISTRY

12.30 - 14.00 **LUNCH BREAK**

INVITED LECTURES ARAMIS 1

- CHAIRMAN: BRASLAVSKY S. (GERMANY)**
- L 34** **14.00-14.55** **TOLBERT L. M. (USA)**
EXCITED-STATE PROTON TRANSFER IN CONSTRAINED
ENVIRONMENT
- L 35** **14.55-15.50** **GREVELS F.-W. (GERMANY)**
PHOTOLYSIS OF GROUP 8 METAL CARBONYLS:
TRANSIENT IR SPECTROSCOPY, PHOTOKINETICS AND
QUANTUM YIELDS OF CO SUBSTITUTION

15.50-16.05 **COFFEE BREAK**

INVITED LECTURES ARAMIS 1

- CHAIRMAN: BOXER S. (USA)**
- L 36** **16.05-16.40** **HAU DOU-MONG (TAIWAN, CHINA)**
 PHOTOCHEMOTHERAPY ON EXPERIMENTAL TUMOR
 WITH PHOTOFRIN II AND LASER
- L 37** **16.40-17.15** **KORPI-TOMMOLA J. (FINLAND)**
 SELFORGANIZATION OF CHLOROPHYLLS IN
 HYDROCARBON SOLUTION AND IN VIVO SYSTEMS:
 PICO- AND FEMTOSECOND RELAXATION IN WATER
 BOUND CHLA AGGREGATES AND CL. TEPIDUM
 CHLOROSOMES.
- L 38** **17.15-17.55** **UZHINOV B.M. (RUSSIA)**
 EXCITED STATE PROTON TRANSFER LASERS

INVITED LECTURES ARAMIS 2

- CHAIRMAN: HOFFMAN M. (USA)**
- L 39** **16.05-16.40** **TERENETSKAYA I. (UKRAINE)**
 AN IN VITRO MODEL OF PREVITAMIN D
 PHOTOSYNTHESIS AS POSSIBLE MONITOR OF SOLAR
 UVB RADIATION: KINETIC STUDIES USING TUNABLE
 LASER
- L 40** **16.40-17.15** **MEL'NIKOV M. (RUSSIA)**
 PHOTORADICAL AGEING OF SOLID POLYMERS

CONFERENCE BANQUET
EGYPTIAN ENTERTAINMENT
STARTING FROM 19.30

6th DAY FRIDAY 13 JANUARY 1995

INVITED LECTURES ARAMIS 1

- CHAIRMAN: CALZAFERRI G. (ZWITZERLAND)**
- L 41** **9.00-9.55** **DUERR H. (GERMANY)**
 MOLECULAR AND SUPRAMOLECULAR SYSTEMS IN
 PHOTOCHROMISM
- L 42** **9.55-10.50** **DOEPP D. (GERMANY)**
 REGIO- AND STEREOSELECTIVITY IN LIGHT INDUCED
 [4+2]-CYCLOADDITIONS OF ALPHA-CYANOENAMINES
 TO AROMATIC CARBONYL COMPOUNDS, NITRILES
 AND HYDROCARBONS

10.50 - 11.05 COFFEE BREAK

INVITED LECTURES		ARAMIS 1
		CHAIRMAN: GREVELS F.-W. (GERMANY)
L 43	11.05-11.40	BILLING R. (GERMANY) SELECTIVE OXIDATION OF ALCOHOLS BY DIPHENYLIODONIUM IONS IN A PHOTOINDUCED CHAIN REACTION
L 44	11.40-12.15	SPANHEL Lubomir (GERMANY) SOL-GEL SYNTHESIS AND SPECTROSCOPIC PROPERTIES OF NANOSCALED HYBRID MATERIALS
L 45	12.15-12.55	ABD-EL-AZIZ A. S. (CANADA) PHOTOLYSIS OF POLYAROMATIC ETHERS AND THIOETHERS WITH PENDANT CYCLOPENTADIENYLIRON MOIETIES
12.55 - 14.00		LUNCH BREAK
INVITED LECTURES		ARAMIS 1
		CHAIRMAN: LOUTFY R. (CANADA)
L 46	14.00-14.55	BOLTON J. (CANADA) SOLAR DETOXIFICATION OF WASTE WATER
L 47	14.55-15.50	HARRIMAN A. (FRANCE) PHOTOCHEMOTHERAPY WITH CYANINE DYES
15.50 -16.20	CLOSING REMARKS ABDEL-MOTTALEB M. S. A.	
COFFEE AND REFRESHMENTS		

12/21/94 07:37 AM

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**KEY: 1 P A1 = PAGE 1 IN ABSTRACT'S BOOK, POSTER NUMBER A1
LEC 45 = LECTURE NUMBER 45 IN THE PROGRAM
FULL LIST OF AUTHORS AND ADDRESSES ARE GIVEN IN THE BOOK OF
ABSTRACTS (ON EACH ABSTRACT)**

- | | |
|---|--------------|
| ABDEL-AZIM S. (EGYPT) | 1 |
| P A1 | |
| THE RAPID DETERIORATION OF ANTHRACENE LASER DYES IN CHLORINATED ORGANIC SOLVENTS | |
|
ABD-EL-AZIZ A. S. (CANADA) |
2 |
| LEC 45 | |
| PHOTOLYSIS OF POLYAROMATIC ETHERS AND THIOETHERS WITH PENDANT CYCLOPENTADIENYLIRON MOIETIES | |
|
ABDEL-LATIF F. M. (EGYPT) |
3 |
| P A2 | |
| PHOTOCHEMICAL REACTION OF 4-NITROBENZYLIDENE MALONONITRILES WITH HYDROGEN DONORS | |
|
ABDEL-RAZIK E. A. (EGYPT) |
4 |
| P A3 | |
| HOMOGENEOUS PHOTOINITIATED GRAFT COPOLYMERIZATION OF 4-VINYL PYRIDINE ONTO ETHYL CELLULOSE | |
| ABDEL-SHAFI A. (ENGLAND/EGYPT) | 5 |
| P A4-5 | |
| 1- CHARGE TRANSFER INTERACTIONS AND EFFICIENCIES OF SENSITIZED SINGLET OXYGEN PRODUCTION FROM SUBSTITUTED BIPHENYLS | |
| 2- SINGLET-SINGLET ENERGY TRANSFER BETWEEN COUMARIN-4 - WATER EXCIPLEX AND COUMARINE314 IN AQUEOUS AND MICELLAR MEDIA | |
|
ABDEL-WAHAB A. A. (EGYPT) |
7 |
| P A6 | |
| ON THE PHOTOGENERATION OF THE PYRIDYLCARBENES | |
|
ABDOU W. (EGYPT) |
8 |
| P A7 | |
| ENVIRONMENTAL DEGRADATION OF PESTICIDES UNDER THE INFLUENCE OF LIGHT | |

ABO ALY M. (EGYPT) 9
P A8
ANALYTICAL DETERMINATION OF IRON (III): FLUORESCENCE QUENCHING
TECHNIQUE

ABOU-ELZAHAB M. M. (EGYPT) 10
P A9-10
1- SYNTHESIS OF SOME POTENTIAL PHOTO-THERAPEUTIC AND SINGLET
OXYGEN SENSITIZERS: HEMATOPORPHYRIN-COUMARINS (HPD-C) AND
HEMATOPORPHYRIN - FUROCOUMARINS (HPD-FC)
2- PHOTOCHEMICAL REACTIONS OF DIBENZALACETONE

ABO-FARHA S. A. M. (EGYPT) 12
P A11
THE ROLE OF INORGANIC COMPLEXES IN ENERGY CONVERSION

ABOU-ZIED K.A. (EGYPT) 13
P A12
ENERGY TRANSFER FROM 2,5-DISTYRYL PYRAZINE (DSP) AND 2,5-BIS 2(2-
NAPHTHYL) VINYL PYRAZINE (B2NVP) TO R6G

ABOU-ZIED O. (CANADA/EGYPT) 14
P A13
STRUCTURES AND LASER INDUCED S_2-S_0 FLUORESCENCE SPECTRA OF VAN
DER WAALS COMPLEXES OF AZULENE AND RELATED COMPOUNDS IN A
SUPERSONIC JET

AGOSTIANO A. (ITALY) 15
P A14
CHARGE RECOMBINATION KINETICS OF PHOTOSYNTHETIC REACTION
CENTERS IN PHOSPHOLIPID ORGANIZED SYSTEMS

AHMED I. SADAT (EGYPT) 17
P A15
THE EFFECT OF SUNLIGHT ON SOME EFFERVESCENT BEVERAGES IN THE
EGYPTIAN MARKET

AL-HASSAN K. A. (JORDAN) 18
LEC
FREE VOLUME SENSING FLUORESCENCE "TICT" PROBES FOR CYCLODEXTRINS
INTERIOR

AL-JALLAL N. (KUWAIT)	19
P A16	
THE INFLUENCE OF METHOXY AND CYANO SUBSTITUENTS ON PHOTO-CYCLOADDITION OF ETHENES TO NAPHTHALENES	
ALI S. I. (INDIA)	20
LEC	
PHOTOEXCITATION OF TRANSITION METAL COMPLEXES IN ORGANIC SUBSTRATES	
ALI S. S. (JAPAN/EGYPT)	21
LEC	
PECULIAR SPIN POLARIZATION IN THE PHOTOLYSIS OF SEVERAL Ni- AND Pt-COMPLEXES	
ALONSO-VANTE N. (GERMANY)	23
LEC 31	
THE SIGNIFICANCE OF SURFACE STATES FOR PHOTOELECTROCATALYSIS AT THE SEMICONDUCTOR/ELECTROLYTE INTERFACES	
ANTONIOUS M. S. (EGYPT)	24
P A17	
DEACTIVATION OF MULTIDIMENSIONAL S_1 -STATE OF SOME LASER DYES	
AQUILANTI V. (ITALY)	25
LEC 18	
NONADIABATIC ENERGY TRANSFER	
AZUMI T. (JAPAN)	26
LEC 12	
STUDIES OF PHOTOCHEMICAL REACTIONS BY NUCLEAR SPIN POLARIZATION-DETECTED ESR SPECTROSCOPY	
BABAQI A. S. (YEMEN)	27
P A18	
A NEW DIOLEFINIC LASER DYE: 2,5-BIS-2-(2-NAPHTHYL) VINYLPIRAZINE (B2NVP)	
BADAWI A. M. (EGYPT)	28
P A19	
TREATMENT OF WASTE WATER FROM REFINERIES BY OZONE/UV CATALYTIC PHOTOOXIDATION	

BADR Z. (EGYPT)	29
LEC 11	
PHOTOLYSIS AND PYRROLYSIS OF ACID AMIDES AND SULPHONAMIDES; MECHANISTIC STUDIES	
BILLING R. (GERMANY)	30
LEC 43	
SELECTIVE OXIDATION OF ALCOHOLS BY DIPHENYLIODONIUM IONS IN A PHOTOINDUCED CHAIN REACTION	
BOLTON J. (CANADA)	31
LEC 46	
SOLAR DETOXIFICATION OF WASTE WATER	
BOXER STEVEN G. (USA)	32
LEC 4	
MECHANISM OF THE EARLY STEPS IN PHOTOSYNTHESIS	
BRASLAVSKY S. (GERMANY)	33
LEC 8	
TIME-RESOLVED PHOTOTHERMAL MEASUREMENTS ON BIOLOGICAL PHOTORECEPTORS	
CALDWELL R. A. (USA)	34
LEC	
INTERSYSTEM CROSSING IN ORGANIC TRIPLET INTERMEDIATES	
CALZAFERRI G. (SWITZERLAND)	35
LEC 3	
DYE MOLECULES IN ZEOLITES AS ARTIFICIAL ANTENNA SYSTEMS	
DMITRUK S.L. (RUSSIA)	37
P A20	
DYNAMICS OF BARRIERLESS STRUCTURAL RELAXATION OF EXCITED PYRIDYLOXAZOLE CATIONS	
DOEPP D. (GERMANY)	39
LEC 42	
REGIO- AND STEREOSELECTIVITY IN LIGHT INDUCED [4+2]-CYCLOADDITIONS OF ALPHA-CYANOENAMINES TO AROMATIC CARBONYL COMPOUNDS, NITRILES AND HYDROCARBONS	

DRUZHININ S. I. (RUSSIA)	41
P A21-22	
1- EXCITED STATE RELAXATION PROCESSES OF CROWNED STYRYL DYES AND THEIR METAL COMPLEXES	
2- TICT-STATE FORMATION DYNAMICS IN N-ALCOHOLS: N,N-DIALKYLAMINONAPHTHALIMIDES	
DUERR H. (GERMANY)	45
LEC 41	
MOLECULAR AND SUPRAMOLECULAR SYSTEMS IN PHOTOCHROMISM	
EBEID E. (EGYPT)	46
P A23	
THE EMISSION CHARACTERISTICS AND PHOTOSTABILITY OF 1,4-BIS [2-BENZOXAZOLYL) VINYL] BENZENE (BBVB) AND 1,4-BIS[BETA-(2-QUINOLYL)VINYLBENZENE (BQVB)	
EL-KEMARY M. (EGYPT)	47
P A24	
THE EMISSION, PHOTOSTABILITY AND COMPLEXATION ABILITY OF TETRAPHENYLPORPHYRIN (TPP)	
EL-NADI LOTFIA (EGYPT)	48
P A25	
LASER-INDUCED DISSOCIATION OF ORGANIC IODINE GASES	
EREMENKO A. (UKRAINE)	49
LEC 25	
PHOTOINDUCED ELECTRON TRANSFER BETWEEN MOLECULES IN SILICA MATRICES	
FARA V. L. (ROMANIA)	51
LEC 24	
PHOTOPHYSICAL AND PHOTOCHEMICAL PROPERTIES OF DYE MOLECULES IN POLYMERS USED FOR FLUORESCENT SOLAR CONCENTRATORS.	
FASSLER D. (GERMANY)	53
LEC 22	
FLUORESCENCE LIFTIMES OF ADSORBED POLYMETHINES	
FITZMAURICE D. (IRELAND)	54
LEC 6	
HETROSUPRAMOLECULAR CHEMISTRY: AN APPROACH TO MODULATING FUNCTION IN MOLECULAR DEVICES.	

FUJIMURA Y. (JAPAN)	56
LEC 29	
NUCLEAR WAVEPACKET STUDY OF UNIMOLECULAR REACTIONS IN ULTRASHORT PULSED LASER	
GEORGE, M. V. (INDIA)	57
P B1	
METAL RECOGNITION AND PHOTSENSITIZING PROPERTIES OF NOVEL SQUARINE DYES	
GIARDINI A. (ITALY)	58
LEC 20	
R2P1 DETECTION AND SPECTROSCOPY OF VAN DER WAALS COMPLEXES OF 4- FLUOROSTYRENE WITH RARE GASES	
GRAETZEL M. (ZWITZERLAND)	59
LEC 1	
NANOCRYSTALLINE SOLAR CELLS; SCIENTIFIC PRINCIPLES AND ECONOMIC PERSPECTIVES	
GREVELS F.-W. (GERMANY)	60
LEC 35	
PHOTOLYSIS OF GROUP 8 METAL CARBONYLS: TRANSIENT IR SPECTROSCOPY, PHOTOKINETICS AND QUANTUM YIELDS OF CO SUBSTITUTION	
GUIDO DE GUIDI (ITALY)	62
P B2	
MOLECULAR MECHANISM OF PHOTSENSITIZATION IN DNA	
GUILLET, J. (CANADA)	63
LEC 2	
SOLAR SYNTHESIS OF HYDROGEN PEROXIDE	
HAFIZ M. M. (EGYPT)	64
P B3	
CHARACTERISTICS OF Si-As-Cu SOLAR CELLS	
HARRIMAN A. (FRANCE)	65
LEC 47	
PHOTOCHEMOTHERAPY WITH CYANINE DYES	
HAU DOU-MONG (TAIWAN, CHINA)	66
LEC 36	
PHOTOCHEMOTHERAPY ON EXPERIMENTAL TUMOR WITH PHOTOFRIN II AND LASER	

HILL CRAIG L. (USA)	67
LEC 7	
EXCITED STATE CHARACTERISTICS AND NEW UNACTIVATED C-H BOND FUNCTIONALIZATION PHOTOCATALYSIS BY $W_{10}O_{32}^{4-}$	
HOFFMAN M. Z. (USA)	68
LEC 14	
ELECTROLYTE AND TEMPERATURE EFFECTS IN PHOTOINDUCED INTER- MOLECULAR ELECTRON-TRANSFER REACTIONS	
KADASHCHUK A. (UKRAINE)	69
P B4	
THE ROLE OF DOPANT DIPOLE MOMENTS ON CHARGE TRANSPORT BEHAVIOR IN MOLECULARLY DOPED POLYMERS	
KAMBER IVO (ZWITZERLAND)	70
P B5	
PHOTOCHEMISTRY AT HIGH TEMPERATURES: INTERATION OF ZnO WITH POSSIBLE PRODUCTS OF CO ₂ REDUCTION	
KARRARAH M. A. (EGYPT)	71
P B6-8	
1- COMPARATIVE ELECTRON MICROSCOPY BETWEEN HYPHAE FROM YOUNG AND OLD CULTURES OF GAEUMANNOMYCES GRAMINIS V. TRITICI, THE TAKE- ALL PATHOGEN OF WHEAT	
2- EFFECT OF INFECTION WITH GAEUMANNOMYCES GRAMINIS V. TRITICI ON WATER ECONOMY IN WHEAT PLANT USING LEAD CHELATE METHOD	
3- FINE STRUCTURE OF THE PRIMARY ROOT OF WHEAT INFECTED WITH GAEUMANNOMYCES GRAMINIS V. TRITICI	
KHAN M. K. A. (BANGLADESH)	74
LEC	
STUDY OF A CU ₂ O BASED PHOTOELECTROCHEMICAL SOLAR CELLS	
KORPI-TOMMOLA J. (FINLAND)	75
LEC 37	
SELFORGANIZATION OF CHLOROPHYLLS IN HYDROCARBON SOLUTION AND IN VIVO SYSTEMS: PICO- AND FEMTOSECOND RELAXATION IN WATER BOUND CHLA AGGREGATES AND CL. TEPIDUM CHLOROSOMES.	
KOSSANYI J. (FRANCE)	76
LEC 28	
UNUSUALLY STRONG EMISSION FROM EXCIPLEXES FORMED BETWEEN BENZENOID SOLVENTS AND DIBENZOYLMETHANATBORON DIFLUORIDE	

KRISHNAN V. (INDIA)	77
LEC 17	
NON-PLANAR PORPHYRIN MOLECULAR ASSEMBLIES	
KURRECK H. (GERMANY)	78
LEC 15	
MIMICKING PRIMARY PROCESSES OF PHOTOSYNTHESIS MODEL COMPOUNDS, LIGHT-INDUCED CHARGE SEPARATION.	
LEUPOLD D. (GERMANY)	79
LEC 14	
CHARACTERIZATION OF PHOTOSYNTHETIC ANTENNAS BY NONLINEAR POLARIZATION SPECTROSCOPY (FREQUENCY DOMAIN)	
LOEHMANN SROEBEN H.G. (GERMANY)	80
LEC 30	
FLUORESCENCE OF POLYNUCLEAR AROMATIC COMPOUNDS AND MINERAL OILS IN ENVIRONMENTAL MONITORING	
LOUTFY R.O. (CANADA)	81
LEC 13	
A NON-SILVER DRY-PROCESSED PHOTOGRAPHIC ARTS FILM	
MAHMOUD A. H. H. (EGYPT)	82
P B9	
INTEGRATED TECHNOLOGY FOR DESERT FARMING WITH SOIL CONDITIONER "RAPG"	
MALINKA E. A. (UKRAINE)	83
P B10	
MECHANISM OF PHOTOCATALYTIC HYDROGEN PRODUCTION IN THE Pt/TiO ₂ /OXALIC ACID SYSTEM	
MALINKA E. (UKRAINE)	84
P B11	
PHOTOINDUCED OXIDATION OF PYROCATECHOL OVER TITANIUM DIOXIDE	
MAZZUCATO UGO (ITALY)	85
LEC 10	
PHOTOCHROMIC MATERIALS: A COMPREHENSIVE KINETIC THERMO-DYNAMIC AND PHOTOCHEMICAL STUDY	
MEL'NIKOV M. (RUSSIA)	86
LEC 40, P B12 or 13	
1- PHOTORADICAL AGEING OF SOLID POLYMERS	

2- PHOTOINDUCED INTRAMOLECULAR CHARGE SEPARATION IN MIXED
LIGAND DITHIOLATO- α - α' -DIIMINE ZINC COMPLEXES

MELE A. (ITALY) 89

P B14

PULSED LASER ABLATION: THIN FILM PRODUCTION AND COATING, PROCESS
DIAGNOSTICS

MOHAMED S. K. (EGYPT) 90

P B15

PHOTOLYSIS OF TRIAZENE-1-OXIDES

MOLL J. (GERMANY) 92

P B16

THE DYNAMICS OF EXCITONS IN THE J-AGGREGATES OF A CARBOCYANINE
DYE

MORRISON H. A. (USA) 93

LEC 26

PHOTOCHEMICAL REARRANGEMENTS OF OXAZRINDINES

MOURAD E. A. (EGYPT) 94

P B17

PHOTOCHEMICAL SYNTHESIS OF TETRABRIDGED CYCLOPHAN

NADA A. A. (EGYPT) 95

P B18

THE PHOTOCHEMICAL REACTION OF DIBROMO-N-METHYLMALEIMIDE WITH 1-
PHENYL-2-METHYL-1,2-DIHYDRO-3,6-PYRIDAZINEDITHIONE

NASR CHOUHAID (CANADA) 96

P B19-20

1- PHOTOELECTROCHEMICAL BEHAVIOR OF COUPLED SnO_2/CdSe SEMICON
DUCTOR FILMS

2- LOW FREQUENCY CAPACITANCE MEASUREMENTS OF ALUMINUM/
MICROCRYSTALLINE CHLOROPHYLL a /SILVER SANDWICH CELLS

NAVIO J. A. (SPAIN) 100

LEC

PHOTODEGRADATION OF BUTYLTIN COMPOUNDS IN WATER: ENVIRON-
MENTAL IMPLICATIONS

OKSANEN J. A.I. (FINLAND)	101
P B21	
FEMTOSECOND KINETICS OF CHLOROPHYLL _a AGGREGATES AND CHLOROSOMES	
OPPENLAENDER Th. (GERMANY)	102
LEC 5	
NOVEL VACUUM-UV-(VUV) AND UV-EXCIMER FLOW THROUGH PHOTORECTORS FOR WAST WATER TREATMENT AND FOR WAVELENGTHS SELECTIVE PHOTOCHEMISTRY	
OZANAM F. (FRANCE)	104
LEC 32	
IN-SITU INFRARED STUDY OF THE INTERFACIAL LAYER DURING THR ANODIC DISSOLUTION OF A SILICON ELECTRODE IN A FLUORIDE ELECTROLYTE	
PARKANYI CYRIL (USA)	105
P B22	
PHOTOLYSIS OF HETEROCYCLIC PESTICIDES	
RAMADAN H. (EGYPT)	106
P B23	
NONRESONANT TRANSFER EXCITATION COLLISION OF Ca ¹⁷⁺ WITH He	
RUSALOV M. V. (RUSSIA)	107
P B24	
EXCITED STATE DEACTIVATION OF CROWDED 7-AMINOCOUMARINS	
SAUER ERIKA (GERMANY)	109
P B25	
NON-RECIPROCITY PHOTOCHEMICAL BEHAVIOUR OF NEW 1,2-NAPHTHO-QUINONE -(2)-DIAZO-SULFONIC ACID ESTERS	
SONG PILL-SOON (USA)	111
LEC 21	
PHYTOCHROME AS LIGHT SENSOR FOR PHOTOSYNTHETIC GENE ACTIVATION	
SPANHEL Lubomir (GERMANY)	113
LEC 44	
SOL-GEL SYNTHESIS AND SPECTROSCOPIC PROPERTIES OF NANOSCALED HYBRID MATERIALS	
TAYEB A. (EGYPT)	114
P B25	
USE OF SOME INDUSTRIAL BY-PRODUCTS AS ENERGY STORAGE MEDIA	

TERENETSKAYA I. (UKRAINE)	115
LEC 39, 116 P B26	
1- AN IN VITRO MODEL OF PREVITAMIN D PHOTOSYNTHESIS AS POSSIBLE MONITOR OF SOLAR UVB RADIATION: KINETIC STUDIES USING TUNABLE LASER	
2- THE PROBLEM OF LIGHT SOURCE IN VITAMIN D INDUSTRIAL SYNTHESIS: LAMP, LASER OR SUN	
TESTA A. C. (USA)	117
LEC 9	
PHOTOINDUCED PROTON TRANSFER IN SUBSTITUTED PYRIDINES	
TOLBERT L. M. (USA)	118
LEC 34	
EXCITED-STATE PROTON TRANSFER IN CONSTRAINED ENVIRONMENT	
UZHINOV B.M. (RUSSIA)	119
LEC 38 P B27 or 28	
1- EXCITED STATE PROTON TRANSFER LASERS	
2- RADIATIONLESS DEACTIVATION AT INTERMOLECULAR EXCITED STATE PROTON TRANSFER OF 2,4,6-TRIARYLPYRIDINES	
WAGNER PETER J. (USA)	122
LEC	
TRIPLET STATE RADICAL CLEAVAGE OF RING SUBSTITUENTS ON PHENYL KETONES: DIFFERENT MODES FOR DIFFERENT ELECTRONIC STATES	
WILLIG F. (GERMANY)	123
LEC	
INJECTION AND DISCHARGE OF PHOTO-GENERATED CHARGE CARRIERS AT THE SEMICONDUCTOR/ELECTROLYTE INTERFACE	
WULFMAN CARL (USA)	124
LEC	
CATASTROPHIC POLARIZATION OF TWISTED EXCITED STATES	
YANAGIDA SHOZO (JAPAN)	125
LEC	
PHENAZINE-PHOTOSENSITIZED REDUCTION OF CO ₂ MEDIATED BY COBALT CYCLAM COMPLEXES	

ZACHARIASSE K. (GERMANY) 126

LEC 23

INFLUENCE OF ENERGY GAP $\Delta E(S_1, S_2)$ AND AMINO N-INVERSION IN INTRAMOLECULAR CHARGE TRANSFER. DUAL FLUORESCENCE AND SINGLE CT-EMISSION

ZENKEVICH E. I. (BELARUS) 127

LEC 19, 128 P B29

1- DIPOLE-DIPOLE AND EXCHANGE ENERGY TRANSFER IN DIFFERENT TYPES OF PORPHYRIN CHEMICAL DIMERS

2-ENERGY AND ELECTRON TRANSFER PROCESSES IN SELF-ORGANIZED PORPHYRIN AND CHLORIN TRIADIC AND PENTADIC COMPLEXES

ZIMMERMAN H. E. (USA) 129

LEC 27

RECENT ADVANCES IN MECHANISTIC AND EXPLORATORY ORGANIC PHOTOCHEMISTRY

LAST MINUTE REGISTRATION

ABDEL-FATTAH M. (EGYPT) 131

P A26

1-IMPROVEMENT OF HYDROGEN GENERATION BY SURFACE MODIFICATION OF SEMICONDUCTOR ELECTRODE

2- A MODEL FOR THE CURRENT-VOLTAGE CURVE OF PHOTO-EXCITED SILICON ELECTRODE

ABDEL-LATIF F. (EGYPT) 133

P B30

FORMATION OF 1,1-DIMETHYL 1- γ -CYANINE IODIDE FROM QUINALDINIUM METHIODIDE UNDER SOLAR AND ULTRAVIOLET ILLUMINATION

AMER A. M. (EGYPT) 134

P A27

FLUORESCENCE PROPERTIES OF EMODINE DERIVATIVES

HAFIZ M. M. (EGYPT) 135

P A28

OPTIMIZATION OF METAL THICKNESS USED IN SCHOTTKY BARRIER SILICON SOLAR CELL

MANSOUR A. F. (EGYPT) 136

P A29

OPTICAL STUDIES OF SOME DYES AS LUMINESCENT SOLAR COLLECTORS

SALIM A. I. (EGYPT)	137
P B31	
STUDY OF THE INCOMING INFRA-RED (IR) SOLAR RADIATION AT CAIRO, EGYPT	
TEGHIL R. (ITALY)	138
P A30	
PULSED LASER ABLATION: THIN FILM PRODUCTION AND COATING; PROCESS DIAGNOSTICS	
ETMAN M. (FRANCE)	139
LEC 33, PA31	
1- STUDIES ON ANODIC DISSOLUTION OF SILICON ELECTRODES IN FLUORIDE MEDIA IN DARKNESS AND UNDER ILLUMINATION	
2- INTEREST OF IMPEDANCE SPECTROSCOPY TECHNIQUES FOR CORROSION MECHANISM INVESTIGATIONS	
MAYHOUB A. B. (EGYPT)	142
PA32	
MODELLING DIFFUSE SOLAR RADIATION USING THREE DIFFERENT APPROACHES	
HASSAN M. F. (EGYPT)	143
PA33	
CURRENT FLOW IN CdS/Si HETEROJUNCTION SOLAR CELL	

12/21/94 10:28 PM

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